

RECEIVED

NOV 12 2003

TECH CENTER 1600/2900

IN THE CLAIMS:

Please amend the claims as follows:

1-110. (CANCELLED)

111. (CURRENTLY AMENDED) A composition comprising a polyclonal library of expression vectors ~~or fragments thereof~~, wherein each vector contains a nucleic acid segment that encodes a pair of variable regions capable of associating with each other to form a binding domain and, wherein the totality of nucleic acid segments provides the polyclonality of said library of vectors, and wherein said polyclonal library of vectors has been obtained by inserting said nucleic acid segments into first vectors followed by in-mass transfer of said nucleic acid segments to second vectors generating the polyclonal library of expression vectors.

112. (PREVIOUSLY PRESENTED) The composition of claim 111 wherein said first vectors are suitable for selection of nucleic acid segments encoding the variable region binding domains.

113. (CANCELLED)

114. (PREVIOUSLY PRESENTED) The composition of claim 111 wherein said first vector has been selected from a larger library of vectors before said in-mass transfer, said larger library of vectors containing nucleic acid segments wherein each segment encodes a pair of variable regions capable of associating with each other to form a binding domain.

115. (PREVIOUSLY PRESENTED) The composition of claim 111 wherein the in-mass transfer is performed without characterization of all individual library members.

116. (PREVIOUSLY PRESENTED) The composition of claim 111 wherein the variable regions are antibody variable regions.

117. (PREVIOUSLY PRESENTED) The composition of claim 111 wherein the variable regions are T cell receptor variable regions.

118. (PREVIOUSLY PRESENTED) The composition of claim 111 wherein said variable regions are derived from any receptor or combination of receptors that contain variable regions.

119. (NOT ENTERED) The composition of claim 123 wherein said variable regions are derived from one species and constant regions are derived from another species.

120. (CURRENTLY AMENDED) The composition of claim 111 wherein said nucleic acid segments ~~are capable of expressing polyclonal receptor proteins wherein each receptor protein contains a pair of~~ encode polypeptides comprising receptor protein variable regions.

121. (CURRENTLY AMENDED) A composition comprising a polyclonal library of vectors ~~or fragments thereof~~, wherein each vector encodes a full length receptor protein and wherein each vector contains a nucleic acid segment that encodes a pair of variable regions which constitutes a part of the full length receptor protein, wherein the variable regions of each pair associate with each other to form a binding domain wherein the totality of nucleic acid segments ~~are~~ is diverse forming a polyclonal library of vectors, wherein the polyclonal library of vectors encodes full-length receptor proteins where the full-length polyclonal receptor proteins comprise both target-specific and cross-reactive receptor proteins.

122. (CANCELLED)

123. (CURRENTLY AMENDED) The composition of claim 111, wherein ~~the~~ said second vector ~~encodes~~ contains receptor constant regions ~~of a receptor protein~~ region genes.

124. (NEW) A composition comprising a polyclonal library of vectors, wherein each vector encodes a full length antibody and wherein each vector contains a nucleic acid segment that encodes a pair of variable regions which constitutes a part of the full length antibody, wherein

the variable regions of each pair associate with each other to form a binding domain wherein the totality of nucleic acid segments is diverse forming a polyclonal library of vectors, wherein the polyclonal library of vectors encodes full-length antibodies where the full-length polyclonal antibody comprise both target-specific and cross-reactive antibodies.

125. (NEW) The composition of claim 111 wherein said second vector contains antibody constant region gene sequences for in-frame insertion of said nucleic acid segment that encodes a pair of antibody variable regions.

126. (NEW) A composition of expression vectors obtained by subcloning a mixture of DNA fragments encoding at least ten different variable region encoding sequences from a library of viral vectors, wherein a member of said library encodes a variable region-containing polypeptide from its genome and variable regions vary between members of said library, into multiple copies of an expression vector generating a library of expression vectors.

127. (NEW) The composition of claim 126, wherein said library of viral vectors has been enriched by affinity selection before performing said subcloning.

128. (NEW) The composition according to claim 126, wherein the expression library diversity after subcloning is reduced by less than 10%.

129. (NEW) The composition of claim 126, wherein said viral vectors are phagemids or phages.

130. (NEW) The composition according to claim 126, wherein said DNA fragments comprise pairs of variable regions encoded by the genome of the viral particle and said pairs of variable regions are comprised of an antibody heavy chain and light chain variable domain.

131. (NEW) The composition of claim 130, wherein said pairs of antibody heavy chain and light chain variable region encoding sequences are subcloned into multiple copies of an expression vector-containing antibody constant region genes.